AMENDMENTS

In the claims:

Please cancel claims 9, 19 and 20 without prejudice or disclaimer.

Please amend claims 1, 10, 13, 18, 21, 22, and 26-29 as follows:

Sub B1 A4

1. (Once Amended) A method of treating a mammalian subject to inhibit stenosis or restenosis of a blood vessel, comprising the step of:

administering to a mammalian subject in need of treatment to inhibit stenosis or restenosis of a blood vessel a composition comprising a polynucleotide,

wherein said composition is administered locally at the site in need of treatment to inhibit stenosis or restenosis,

wherein said polynucleotide comprises a nucleotide sequence that encodes a vascular endothelial growth factor C (VEGF-C) polypeptide operatively linked to a promoter to promote expression of the VEGF-C polypeptide in cells of the blood vessel, and

wherein expression of said VEGF-C polypeptide in said blood vessel cells inhibits stenosis or restenosis of said blood vessel.

A2

10. (Amended) A method according to claim 1 wherein the polynucleotide further comprises a polyadenylation sequence operably connected to the sequence that encodes the VEGF-C polypeptide.

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13. (Amended) A method according to claim 12 wherein said vector comprises a replication-deficient adenovirus, said adenovirus comprising the polynucleotide operably connected to the promoter and flanked by adenoviral polynucleotide sequences.

A4 Sub B2

18. (Once Amended) A treatment to inhibit stenosis or restenosis of a blood vessel in a human, comprising delivering a replication-deficient adenovirus vector to the vessel, said vector comprising a polynucleotide encoding a VEGF-C polypeptide, and further comprising a promoter sequence to promote expression of the VEGF-C

A4 CONT.

polypeptide in cells of the blood vessel, wherein expression of said VEGF-C polypeptide in said blood vessel cells inhibits stenosis or restenosis of the blood vessel.

SUB B3

21.(Once Amended) A method of treating a mammalian subject to inhibit stenosis or restenosis of a blood vessel, comprising the step of:

A5

administering to a mammalian subject in need of treatment to inhibit stenosis or restenosis of a blood vessel a composition locally at a site in need of treatment to inhibit stenosis or restenosis, said composition comprising a polynucleotide comprising a nucleotide sequence that encodes a vascular endothelial growth factor D (VEGF-D) polypeptide operatively linked to a promoter to promote expression of the VEGF-D polypeptide in cells of the blood vessel, wherein expression of said VEGF-D polypeptide in said blood vessel cells inhibits stenosis or restenosis of said blood vessel.

22. (Once Amended) An improvement in a medical device designed to contact a surface of a blood vessel in the course of surgery to treat stenosis of the blood vessel, improvement comprising integrating into the device a composition effective to prevent restenosis, said composition comprising at least one anti-restenosis agent selected from the group consisting of a VEGF-C polynucleotide operatively linked to a promoter that promotes expression of VEGF-C in cells of blood vessels, and a VEGF-D polynucleotide operatively linked to a promoter that promotes expression of VEGF-D in cells of blood vessels.

A6

26. (Once Amended) A medical device comprising an endovascular stent having an outer surface for contacting a surface of a blood vessel, and a composition on said surface, said composition comprising at least one anti-restenosis agent selected from the group consisting of a VEGF-C polynucleotide operatively linked to a promoter that promotes expression of VEGF-C polypeptide in cells of blood vessels and a VEGF-D polynucleotide operatively linked to a promoter that promotes expression of VEGF-D polypeptide in cells of blood vessels.

27. (Once Amended) A medical device comprising a catheter having an outer surface for contacting a surface of a blood vessel, and a composition on said surface, said composition comprising at least one member selected from the group consisting of a VEGF-C polynucleotide operatively linked to a promoter that promotes expression of VEGF-C polypeptide in cells of blood vessels and a VEGF-D polynucleotide operatively linked to a promoter that promotes expression of VEGF-D polypeptide in cells of blood vessels.

A6

28. (Once Amended) A medical device comprising a balloon catheter having a void for holding a therapeutic agent for delivery to the interior of a blood vessel, and a composition contained in the void, the composition comprising at least one anti-restenosis agent selected from the group consisting of a VEGF-C polynucleotide operatively linked to a promoter that promotes expression of VEGF-C polypeptide in cells of blood vessels and a VEGF-D polynucleotide operatively linked to a promoter that promotes expression of VEGF-D polypeptide in cells of blood vessels.

CONT.

29.(Once Amended) A kit for treating restenosis comprising a container holding at least one anti-restenosis agent selected from the group consisting of a VEGF-C polynucleotide operatively linked to a promoter that promotes expression of VEGF-C in cells of blood vessels and a VEGF-D polynucleotide operatively linked to a promoter that promotes expression of VEGF-D in cells of blood vessels; and a label attached to or packaged with the container, the label describing use of the agent for inhibition of restenosis of a blood vessel.

Please add the following new claims 31-72 to the application:

--31. (New) A kit according to claim 30, further comprising a carrier substance for delivery of the agent to the lumenal wall of a vessel.

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32. (New) A kit according to claim 31, wherein the carrier is selected from the group consisting of a hydrogel polymer and microparticle polymers.

33. (New) A method according to claim 21 wherein said mammalian subject is human.

34. (New) A method according to claim 33 wherein said VEGF-D polypeptide comprises a mammalian VEGF-D.

35. (New) A method according to claim 33 wherein said VEGF-D polypeptide comprises a human VEGF-D.

A7 CONT.

36. (New) A method according to claim 33 wherein said VEGF-D polypeptide comprises an amino acid sequence comprising a continuous portion of SEQ ID NO: 4, said continuous portion consisting of positions 93-201 of SEQ ID NO: 4.

37. (New) A method according to claim 36 wherein said polynucleotide further comprises a nucleotide sequence encoding a secretory signal peptide, and wherein the sequence encoding the secretory signal peptide is connected in-frame with the sequence that encodes the VEGF-D polypeptide.

38. (New) A method according to claim 33 wherein said VEGF-D polypeptide comprises an amino acid sequence comprising a continuous portion of SEQ ID NO: 4, said continuous portion comprising positions 93-201 of SEQ ID NO: 4, wherein said polynucleotide lacks a nucleotide sequence encoding amino acids 1-92 of SEQ ID NO: 4.

39. (New) A method according to claim 33 wherein said VEGF-D polypeptide comprises an amino acid sequence comprising a continuous portion of SEQ ID NO: 4, said continuous portion comprising positions 93-201 of SEQ ID NO: 4, wherein said polynucleotide lacks a nucleotide sequence encoding amino acids 202-354 of SEQ ID NO: 4.

40. (New) A method according to claim 21 wherein the polynucleotide further comprises a polyadenylation sequence operably connected to the sequence that encodes the VEGF-D polypeptide.

41. (New) A method according to claim 33 wherein the composition further comprises a pharmaceutically acceptable carrier.

42. (New) A method according to claim 33 wherein the composition comprises a gene therapy vector, said gene therapy vector comprising said polynucleotide.

A7 CONT.

43. (New) A method according to claim 42 wherein said vector comprises a replication-deficient adenovirus, said adenovirus comprising the polynucleotide operably connected to the promoter and flanked by adenoviral polynucleotide sequences.

44. (New) A method according to claim 33 wherein said administering comprises at least one intravascular injection of said composition.

45. (New) A method according to claim 33 wherein said administering comprises a catheter-mediated transfer of said composition into a blood vessel of the mammalian subject.

46. (New) A method according to claim 45 wherein said catheter-mediated gene transfer comprises introducing a catheter into a coronary artery of the mammalian subject, and releasing the composition into the coronary artery.

47. (New) A method according to claim 33 wherein said administering is conducted in said human concurrently with a percutaneous transluminal coronary angioplasty.

Sub B4

48. (New) A treatment to inhibit stenosis or restenosis of a blood vessel in a human, comprising delivering a replication-deficient adenovirus vector to the vessel, said vector comprising a polynucleotide encoding a VEGF-D polypeptide, and further comprising a promoter sequence to promote expression of the VEGF-D polypeptide in cells of the blood vessel, wherein expression of said VEGF-D polypeptide in said blood vessel cells inhibits stenosis or restenosis of the blood vessel.

49. (New) A method of treating a mammalian subject to inhibit restenosis of a blood vessel, comprising the step of:

identifying a mammalian subject that has been or will be treated for a stenosed blood vessel; and

administering to the mammalian subject at the site of the stenosed blood vessel a composition comprising a polynucleotide, said polynucleotide comprising a nucleotide sequence that encodes a vascular endothelial growth factor C (VEGF-C) polypeptide or a vascular endothelial growth factor D (VEGF-D) polypeptide,

wherein the polynucleotide includes a promoter sequence operably linked to the encoding sequence to promote expression of the polypeptide in cells of the blood vessel, and

wherein expression of the VEGF-C or VEGF-D polypeptide inhibits restenosis of said blood vessel.

A7 CONT.

50. (New) A method according to claim 49 wherein said mammalian subject is human.

51. (New) A method according to claim 49 wherein the blood vessel is a coronary artery, and the administering is performed concurrently with percutaneous transluminal coronary angioplasty to treat the stenosed blood vessel.

52. (New) A method according to claim 49 wherein said polynucleotide comprises a nucleotide sequence encoding a mammalian VEGF-C polypeptide.

53. (New) A method according to claim 49 wherein said polynucleotide comprises a nucleotide sequence encoding a human VEGF-C polypeptide.

54. (New) A method according to claim 53 wherein said VEGF-C polypeptide comprises an amino acid sequence comprising a continuous portion of SEQ ID NO: 2, said continuous portion having, as its amino terminus, an amino acid selected from the group consisting of positions 30-131 of SEQ ID NO: 2, and having, as its carboxyl terminus, an amino acid selected from the group consisting of positions 211 to 419 of SEQ ID NO: 2.

A7 CONT.

55. (New) A method according to claim 54 wherein said polynucleotide lacks a nucleotide sequence encoding amino acids 228-419 of SEQ ID NO: 2.

56. (New) A method according to claim 55 wherein said polynucleotide lacks a nucleotide sequence encoding amino acids 32-102 of SEQ ID NO: 2.

57. (New) A method according to claim 49 wherein said polynucleotide further comprises a nucleotide sequence encoding a secretory signal peptide, and wherein the sequence encoding the secretory signal peptide is connected in-frame with the sequence that encodes the VEGF-C or VEGF-D polypeptide.

58. (New) A method according to claim 57 wherein the polynucleotide further comprises a polyadenylation sequence operably connected to the sequence that encodes the VEGF-C or VEGF-D polypeptide.

59. (New) A method according to claim 49 wherein said polynucleotide comprises a nucleotide sequence encoding a mammalian VEGF-D polypeptide.

60. (New) A method according to claim 59 wherein said VEGF-D polypeptide comprises an amino acid sequence comprising a continuous portion of SEQ ID NO: 4, said continuous portion consisting of positions 93-201 of SEQ ID NO: 4.

61. (New) A method according to claim 59 wherein said VEGF-D polypeptide comprises an amino acid sequence comprising a continuous portion of SEQ ID NO: 4, said continuous portion comprising positions 93-201 of SEQ ID NO: 4, wherein said polynucleotide lacks a nucleotide sequence encoding amino acids 1-92 of SEQ ID NO: 4.

A7 CONT.

62. (New) A method according to claim 59 A method according to claim 33 wherein said VEGF-D polypeptide comprises an amino acid sequence comprising a continuous portion of SEQ ID NO: 4, said continuous portion comprising positions 93-201 of SEQ ID NO: 4, wherein said polynucleotide lacks a nucleotide sequence encoding amino acids 202-354 of SEQ ID NO: 4.

63. (New) A method according to claim 49 wherein the composition comprises a gene therapy vector, said gene therapy vector comprising said polynucleotide.

64. (New) A method according to claim 63 wherein said vector comprises a replication-deficient adenovirus, said adenovirus comprising the polynucleotide flanked by adenoviral polynucleotide sequences.

65. (New) A method according to claim 49 wherein the composition further comprises a pharmaceutically acceptable carrier.

66. (New) A method according to claim 49 wherein said administering comprises at least one intravascular injection of said composition at the site of the stenosed blood vessel.

67. (New) A method according to claim 49 wherein said administering comprises a catheter-mediated transfer of said composition to the site of the stenosed blood vessel.

68. (New) A method according to claim 49 wherein said catheter-mediated gene transfer comprises introducing a catheter into a coronary artery of the mammalian subject, and releasing the composition into the coronary artery.

A7 CONT.

69. (New) A method according to claim 49 wherein said administering comprises implanting an intravascular stent in said mammalian subject at the site of the stenosed blood vessel, and wherein the stent is coated or impregnated with the composition.

70. (New) An extravascular collar designed to contact a surface of a blood vessel in the course of surgery to treat stenosis of the blood vessel, the collar comprising an outer wall shaped to surround the outer surface of a blood vessel, wherein the wall encloses a space containing a composition comprising a polynucleotide that comprises a nucleotide sequence encoding a VEGF-C polypeptide or a VEGF-D polypeptide, and wherein the polynucleotide further comprises a promoter to promote expression of the polypeptide in mammalian cells.

71. (New) A unit dosage formulation comprising a polynucleotide that comprises a promoter for promoting expression of a polypeptide in mammalian cells operably linked to a nucleotide sequence encoding a VEGF-C polypeptide or a VEGF-D polypeptide, packaged in a container, wherein the container includes a label containing an indication to use the formulation to treat restenosis.